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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,320	01/16/2004	Kun-Ying Tsai	60569 (71987)	8365
21874	7590	06/28/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			FRANKLIN, RICHARD B	
			ART UNIT	PAPER NUMBER
			2181	

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/759,320	Applicant(s) TSAI, KUN-YING	
	Examiner Richard Franklin	Art Unit 2181	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|---|---|


FRITZ FLEMING
Supervisory PRIMARY EXAMINER
GROUP 2100
6/12/2006
Au 2187

DETAILED ACTION

1. Claims 1 – 9 and 11 – 14 have been examined.

Response to Arguments

2. Applicant's arguments, see Page 10 Lines 16 – 19 and Page 11 Lines 1 – 11, filed 14 April 2006, with respect to the rejection(s) of claim(s) 1 – 14 under 35 USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art references.
3. Upon reviewing Applicant's arguments, the Examiner is not sure how to respond to the request for the rejection under 35 USC 102(b) (see Page 10 Lines 14 – 15, filed 14 April 2006). Applicant is respectfully requested to clarify the request, so the Examiner may properly respond.
4. Applicant's argument that Brown does not teach or suggest "a data length calculating module controlled by the network communication system module, and for calculating the length of a data byte waiting to be transferred for the dynamic burst length calculating system," see Page 10 Lines 20 – 23, is not persuasive. Brown teaches comparing the value of the RxUsed register with "the size of the current data fragment awaiting upload" (Brown; Col 15 Lines 55 – 60). While this does not **explicitly** teach calculating the data length, it is **obvious** that the system of Brown performs a calculation of the length of the waiting data in order to use it in the comparison. Therefore, the limitation is taught by Brown.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1 – 8 are rejected under 35 U.S.C. 101 because the claims fail the practical application test. The claims recite data transformation per se with no tangible result.

As per claims 1 – 8, the claims recite non-statutory subject matter that is directed solely to data transformation with no claimed tangible result. The result of the claims appear to be a thought (selection) or a mere computation within a processor rather than a real world tangible result that is a practical application of the abstract idea of “selecting.”

Claim Rejections - 35 USC § 112 1st Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is not described in the specification how an address is set to infinity.

7. Claims 8 and 14 are rejected under 35 U.S.C. 112, first paragraph as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The use of Fast Ethernet is not described in the specification and it is not described how the system would use Fast Ethernet.

Claim Rejections - 35 USC § 112 2nd Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 – 9, and 11 – 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. As per claim 1, the claim recites, "...calculating the length of this data byte..." in line 2 of step (3). The length of a data byte is always going to be a byte (8 bits), and therefore does not need to be calculated. It is unclear what length is being calculated since the length being calculated is always the same.

10. As per claim 2, the claim recites, "...calculating the length of a data byte waiting..." in line 10 of the claim and "...determining the length of burst data byte..." in

line 19 of the claim. The length of a data byte is always going to be a byte (8 bits), and therefore does not need to be calculated. It is unclear what length is being calculated since the length being calculated is always the same.

11. As per claim 3, the claim recites, "...a data end index address is set to infinity" in line 2 of the claim. The number "infinity" is itself indefinite by nature because it is a number that cannot be defined in mathematics by a single number.

12. As per claim 9, the claim recites, "...calculating the length of a data byte waiting..." in line 19 of the claim and "...determining the length of burst data byte..." in line 29 of the claim. The length of a data byte is always going to be a byte (8 bits), and therefore does not need to be calculated. It is unclear what length is being calculated since the length being calculated is always the same.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13. Claims 9 and 11 – 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,397,287 (hereinafter Brown).

As per claim 9, Brown teaches a CPU (Figure 1 Item 12, Col 6 Lines 20 – 41); a main memory unit bus (Figure 1 Item 22, Col 6 Lines 20 – 49); a network communication system connecting module (Figure 1 Item 20, Col 6 Line 50 – Col 7 Line 16); wherein the network communication system connecting module comprises: a buffer memory unit (Figure 1 Items 23 and 25) controlled by the network communication system connecting module (Figure 1 Item 20) for data access of the buffering memory unit, and for providing a specific area for holding data to be sent or received (Col 7 Lines 61 – 67); a valid data calculating module (Col 2 Line 55 – Col 3 Line 5, Col 13 Lines 55 – 61) controlled by the network communication system connecting module and for calculating the number of valid data in the buffering memory unit (Col 2 Line 55 – Col 3 Line 5) for the dynamic length calculating system; a main memory unit bus requesting module (Figure 1 Item 21, Col 6 Line 50 – Col 7 Line 16) controlled by the network communication system connecting module, and for determining whether the number of valid data in the buffer memory unit calculated by the valid data calculating module exceeds a preset value and for determining whether the data length exceeds preset capacity of data storage in the main memory unit (Col 7 Lines 10 – 15), so as to send the usage request to the main memory unit bus in case of the data length not exceeding the preset capacity of data storage (Col 3 Lines 25 – 32); a burst length determining module controlled by the network communication system connecting module, and for determining the length of burst data byte for the dynamic burst length calculating system (Col 14 Lines 28-61); and a main memory unit (Col 6 Lines 20 – 40, Figure 1 Item 16).

Brown does not **explicitly** teach that the data length calculating module calculates the length of a data byte waiting to be transferred.

However, Brown does teach comparing the RxUsed register with the size of the current data fragment awaiting upload (Col 15 Lines 55 – 60).

Therefore, Brown **inherently** teaches calculating the length of a data fragment waiting to be transferred because in order to use the length for a comparison, the length of the waiting data fragment must be calculated by the system.

As per claim 11, Brown also teaches wherein the network communication system connecting module is a network interface card (Abstract; Figure 1 Item 20, Col 6 Lines 3 – 19).

As per claim 12, Brown also teaches wherein the network communication system connecting module is connected to a network communication system (Figure 1 Item 24, Col 6 Lines 28 – 29).

As per claim 13, Brown also teaches wherein the network communication system is a Local Area Network (LAN) (Col 2 Lines 38 – 41).

As per claim 14, Brown also teaches wherein an Ethernet protocol is used to communicate between devices (Col 7 Line 67 – Col 8 Line 3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1 – 2 and 4 – 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,397,287 (hereinafter Brown) in view of US Patent Application Publication No. 2004/0258141 (hereinafter Tustison) and further in view of US Patent No. 5,953,418 (hereinafter Bock).

As per claim 1, Brown teaches a CPU (Brown; Figure 1 Item 12, Col 6 Lines 20 – 41); a main memory unit bus (Brown; Figure 1 Item 22, Col 6 Lines 20 – 49); a network communication system connecting module (Brown; Figure 1 Item 20, Col 6 Line 50 – Col 7 Line 16); a main memory unit (Brown; Col 6 Lines 20 – 40, Figure 1 Item 16); determining via a valid data calculating module (Brown; Col 2 Line 55 – Col 3 Line 5, Col 13 Lines 55 – 61) whether the number of valid packet data in the buffering memory unit exceeds a preset main memory unit bus requesting threshold (Brown; Figures 6a – 6c, Col 14 Lines 28 – 61); if no, repeating step (2) (Brown; Figure 7 Transition from Item 740 to Item 715); if yes, determine via a main memory bus requesting module (Brown; Figure 1 Item 21, Col 6 Line 50 – Col 7 Line 16) whether the packet data length exceeds preset capacity of packet data storage in the main memory unit (Brown; Figure 7, Col 14 Lines 28 – 61), wherein if yes, a usage request is no longer sent to the main memory unit bus, or if no, the main memory unit bus requesting module sends the

usage request to the main memory unit bus (Brown; Col 14 Lines 28 – 61, Figure 7); and having a burst length determining module (Brown; Col 14 Lines 28 – 61) compare the valid data byte length, the packet data length and the preset burst length in the buffering memory unit, and select the least one as a burst length value (Brown; Col 2 Line 52 – Col 3 Line 32).

Brown does not teach that when a data byte is written to a buffer memory unit, adding a write-in index address in a register by one; and when a data byte is read out from the buffering memory unit, adding a read-out index address in the register by one.

However, Tustison teaches that when a data byte is written to a buffer memory unit, adding a write-in index address in a register by one (Tustison; Paragraph [0034]); and when a data byte is read out from the buffering memory unit, adding a read-out index address in the register by one (Tustison; Paragraph [0034]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teaching of Brown to include the read and write address indexes because doing so allows the system to keep track of when new data is received or is ready to transmit (Tustison; Paragraph [0034]).

Brown in combination with Tustison does not teach determining via a data length calculating module whether a sending data byte is the end of the packet data; if no, repeating; and if yes, calculating the length of this data byte.

However, Bock teaches determining via a data length calculating module whether a sending data byte is the end of the packet data (Bock; Figure 18 Item 354); if no, repeating (Bock; Figure 18 Item 354 “NO” condition to Item 356 “NO” condition, Col

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25 Line 48 – Col 26 Line 4); and if yes, calculating the length of this data byte (Bock; Col 19 Lines 49 – 61).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Brown in combination with Tustison to include the end of packet checking because doing so allows the system to keep track of the size of data packets that are sent (Bock; Col 19 Lines 49 – 61).

As to claim 2, Brown in combination with Tustison and Bock also teaches wherein the network communication system connecting module comprises: a buffer memory unit (Brown; Figure 1 Items 23 and 25) controlled by the network communication system connecting module (Brown; Figure 1 Item 20) for data access of the buffering memory unit, and for providing a specific area for holding data to be sent or received (Brown; Col 7 Lines 61 – 67); a valid data calculating module (Brown; Col 2 Line 55 – Col 3 Line 5, Col 13 Lines 55 – 61) controlled by the network communication system connecting module and for calculating the number of valid data in the buffering memory unit (Brown; Col 2 Line 55 – Col 3 Line 5) for the dynamic length calculating system; a main memory unit bus requesting module (Brown; Figure 1 Item 21, Col 6 Line 50 – Col 7 Line 16) controlled by the network communication system connecting module, and for determining whether the number of valid data in the buffer memory unit calculated by the valid data calculating module exceeds a preset value and for determining whether the data length exceeds preset capacity of data storage in the main memory unit (Brown; Col 7 Lines 10 – 15), so as to send the usage request to the

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main memory unit bus in case of the data length not exceeding the preset capacity of data storage (Brown; Col 3 Lines 25 – 32); and a burst length determining module controlled by the network communication system connecting module, and for determining the length of burst data byte for the dynamic burst length calculating system (Brown; Col 14 Lines 28-61).

Brown in combination with Tustison and Bock does not **explicitly** teach that the data length calculating module calculates the length of a data byte waiting to be transferred.

However, Brown does teach comparing the RxUsed register with the size of the current data fragment awaiting upload (Brown; Col 15 Lines 55 – 60).

Therefore, Brown in combination with Tustison and Bock **obviously** teaches calculating the length of a data fragment waiting to be transferred because in order to use the length for a comparison, the length of the waiting data fragment must be calculated by the system.

As per claim 4, Brown also teaches adding a clock delay to the end of the packet data to distinguish different packets (Brown; Col 10 Lines 29 – 65).

As per claim 5, Brown also teaches wherein the network communication system connecting module is a network interface card (Brown; Abstract; Figure 1 Item 20, Col 6 Lines 3 – 19).

As per claim 6, Brown also teaches wherein the network communication system connecting module is connected to a network communication system (Brown; Figure 1 Item 24, Col 6 Lines 28 – 29).

As per claim 7, Brown also teaches wherein the network communication system is a Local Area Network (LAN) (Brown; Col 2 Lines 38 – 41).

As per claim 8, Brown also teaches wherein an Ethernet protocol is used to communicate between devices (Brown; Col 7 Line 67 – Col 8 Line 3).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

16. Taiwan Patent No. 575809 (hereinafter Taiwan Patent) is a foreign filing of the current application and was filed more than 12 months prior to the US filing date of the current application. The patent date of the Taiwan Patent is 11 February 2004, which is almost one month after the US filing date of the current application. Therefore, the Taiwan Patent is not applicable as a reference for a rejection under 35 USC 102(d) because the patent date of the Taiwan Patent is after the US filing date of the current application.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Richard Franklin
Patent Examiner
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Supervisory
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